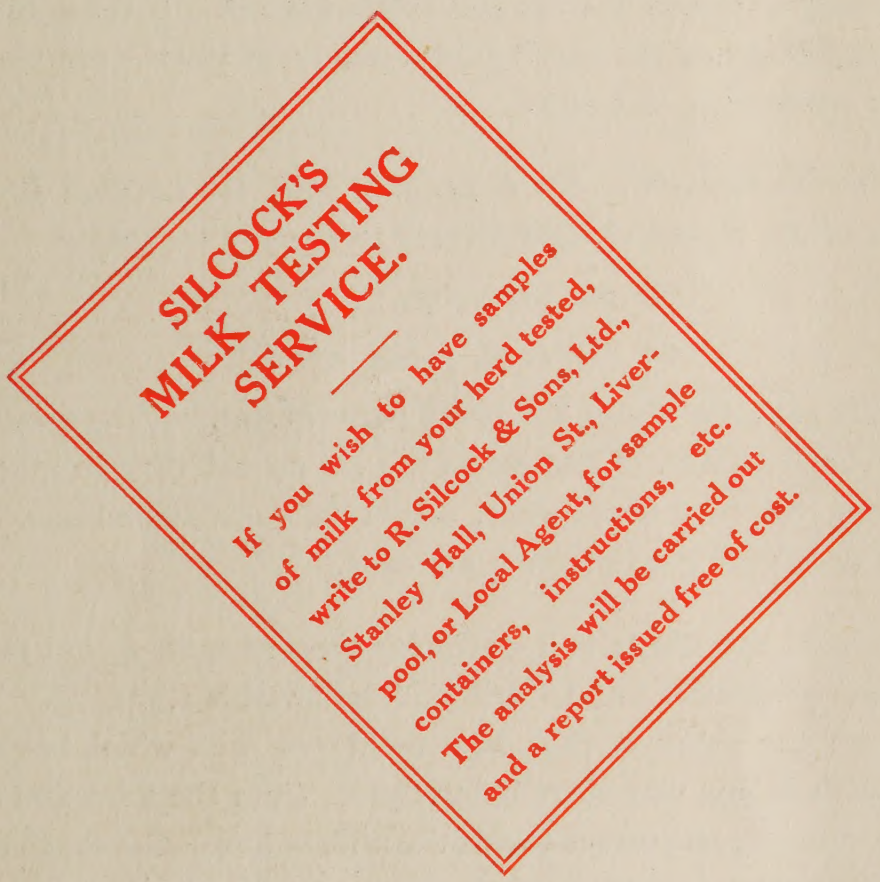
NOTES ON MILK ANALYSIS


SILCOCK'S
MILK TESTING
SERVICE.
If you wish to have samples of milk from your herd tested, write to R. Silcock & Sons, Ltd., Stanley Hall, Union St., Liverpool, or Local Agent, for sample containers, instructions, etc. The analysis will be carried out and a report issued free of cost.

R. SILCOCK & SONS LTD.,
LIVERPOOL.

NOTES ON MILK ANALYSIS.

For the purpose of analysis milk is divided into three parts—

MILK FAT,

SOLIDS NOT FAT,

WATER.

It is usual only to report the fat and solids not fat. If these two figures are added together and the result subtracted from 100 the remainder is, of course, the percentage of water.

LEGAL STANDARDS. A genuine milk is expected (under the regulations of the Board of Agriculture) to contain at least—

3 per cent. fat,

8½ per cent. solids not fat.

Average milk contains about 3.3 to 3.5 per cent. fat, but the actual figures found are very variable. The solids not fat do not vary so much, and a milk showing 8.6 to 8.8 per cent. would be quite a good one, although sometimes the figure goes above 9 per cent.

The official standards laid down for genuine milk do not mean that there is any obligation not to sell milk below this standard. The only obligation on the seller is that he should sell milk which has not been tampered with in any way since being drawn from the cow, and also that he take reasonable precautions to mix the milk before each sale, so that each customer may get a fair share of the fat content. On the other hand, if milk below the standard quality is sold the seller may have to go to considerable trouble to prove that the milk is genuine and that between the milk being drawn from the cow and its sale no fat has been abstracted from it, and no water has been added to it. He may fail to prove this, and is then liable to the penalties laid down for adulteration. Producers and sellers of milk should, therefore, have periodical tests done, and where the milk is found to be of poor quality take every possible precaution to bring it up in quality.

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CAUSES OF VARIATION.

1. BREED. Certain breeds of cows, for example Channel Island breeds, give milk very rich in fat. The standards, however, have been set low enough to include moderately poor quality milk of any of the other breeds.

2. TIMES OF MILKING. Where the intervals between milking are uneven more milk and poorer will usually be obtained after the longer interval. This is usually the case with morning milk. For example, if the milking hours are 6 a.m. and 4 p.m.—

The Afternoon's milk is taken at the end of a 10-hour interval;
The Morning's milk is taken at the end of a 14-hour interval.

In such a case the Afternoon milk is often from 0.5 to 0.75 per cent. higher in fat.

3. THE INDIVIDUAL COW. The quality of the milk from different cows varies considerably. Cows when giving most milk are usually giving milk of lower quality than their average.

4. MILKING METHODS. Rapid and skilful milking will produce better milk than inefficient labour. Failure to strip the cow properly will have a very great effect on the quality of the mixed milk. The first milk drawn might for example be as poor as 1.5 per cent. fat, while the last milk drawn could be over 4 per cent., the average being well over 3 per cent. It should be remembered that failure to strip properly causes the cow to dry off more quickly than she would otherwise do.

5. SEASONAL CHANGES. Milk tends to be rather poorer in fat in warm weather than in cold.

6. FOOD STUFFS. The actual foodstuffs used have not much effect on the quality of the milk, provided the whole ration is reasonably suitable. The tendency is for the feeding to affect quantity rather than quality. Very unsuitable feeding might affect the quality of the milk by upsetting the digestive system of the cow.

IMPROVING THE QUALITY OF LOW GRADE MILK.

1. MILKING ARRANGEMENTS. Where there is a considerable difference in the intervals of milking this difference should, so far as is

practicable, be decreased, the ideal interval being twelve hours, which means milking at the same hour in the morning and in the evening. This is usually not possible. The heaviest milking cows should be milked first in the morning and last in the evening. Very heavy milking cows should be milked three times a day. In the case of three times milking the extra trouble is compensated by an increase in the day's yield of milk, and in less rapid drying off.

2. MILK FROM INDIVIDUAL COWS. If the milk from certain cows is suspected to be poor, special care should be taken to distribute the milk of these cows among three or more churns and to these churns should be added the milk of cows which are known or supposed to be giving rich milk. It is always a wise plan to see that each churn of milk sent out is made up from a portion of the milk of as many cows as possible.

3. MILKING METHODS. As every farmer knows, poor and inexperienced milkers and irregular hours are often responsible for unsatisfactory yields of milk. They have also a bad effect upon the quality. Good milkers, interested in their work are, on the other hand, a very considerable advantage. Where it is suspected that the milking is not as good as it might be an occasional check should be made to see that stripping has been thoroughly carried out. The adoption of a system of recording has the effect both of interesting the workers in the subject and enabling the herd owner to see when the milking of individual cows is very irregular.

4. FEEDING. Whenever you have reason to believe that the milk of the herd is becoming low in quality discuss your methods of feeding with R. Silcock & Sons' Advisory Department. Although a radical change in feeding may not be necessary a comparatively small change may play some part, together with other improvements, in bringing the milk up to a more desirable quality.

BY APPOINTMENT

R. SILCOCK & SONS, LIMITED,

Stanley Hall, Union Street,

LIVERPOOL.

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